

importantly, a bridge represents the greatest opportunity of all highway failures for loss of life. For these reasons, it is imperative that bridges be constructed to the same design standards as the system of which they are a part.

Congress enacted the National Bridge Inspection Program Standards on April 27, 1971, implementing the Federal Highway Act of 1968. These standards require that "all structures defined as bridges located on any of the Federal-Aid Highway be inspected and the safe load carrying capacity computed at regular intervals, not to exceed two years."

Deficient bridges are categorized as either structurally deficient or functionally obsolete. **Structural deficiency** does not always mean that a bridge is unsafe. It usually indicates that a bridge is unable to handle the vehicle loads or speeds that would normally be expected on the highway system where the bridge is located. These limitations are then posted at the bridge approach. Structural deficiencies are particularly troublesome since they must be load posted for safety's sake. Although load posting (the imposition of a vehicle weight restriction), typically does not affect auto and light truck users, it does affect trip time and costs for other types of trucks that are required to detour in order to avoid a structurally deficient bridge.

A bridge that is **functionally obsolete** usually has inadequate width or vertical clearance for its associated highway system. In some cases, bridges are made functionally obsolete because of highway improvements on the approaches to the bridge, such as lane additions or widening of approaching roads. In other cases, bridges may be reevaluated as functionally obsolete if engineering standards have changed. Functionally obsolete bridges restrict the efficient use of the system because they act as bottlenecks.

The North Carolina DOT's Bridge Maintenance Unit, with assistance from various consultants, inspects all bridges on the State Highway System. All bridges in the Farmville Urban Area have been analyzed, rated, appraised, and inventoried, and the resulting data has been reduced to a more readily useable form as a management tool. A sufficiency index number has been calculated for each bridge to establish eligibility and priority for replacement. The bridges with the highest priority are replaced as Federal-Aid funds and State funds are made available.

The sufficiency rating is a method of evaluating deficiency factors that determine whether a bridge is sufficient to remain in service. The result of this method is a percentage in which 100 percent represents an entirely sufficient bridge and zero percent represents an entirely insufficient or deficient bridge. A sufficiency rating of 50 percent or less qualifies for Federal Bridge Replacement Funds.

Farmville Urban Area has only four deficient bridges. They cross Little Contentnea Creek and Middle Swamp. The bridge located on SR 1345, a dirt road, in Greene County is the most